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# ON THE PROPER MODE OF ESTIMATING THE VALUE OF PERMANENT AND TERMINABLE ANNUITIES.

*To the Editor of the Assurance Magazine.*

SIR,—In valuing permanent or terminable annuities, much must depend on the object and purpose of investment, and as to how far the realization of the capital on the revenue desired from it is of principal importance. Where immediate realization is or may be required, the price that will be brought is of course the sole consideration; where, on the other hand, the revenue to be derived from the investment is the entire object, the price, paradoxical as it may seem, is little or no criterion of the value at which it should be estimated.

Thus, if the object in view be to secure in perpetuity an obligation for an annuity of £30, and this has been secured for £800, it will be of no consequence that the selling price of the fund rises to £1000; it is still put equal to the obligation, and if it be estimated at more, a corresponding value must be attached to the obligation. In short, whether the value of the fund rises or falls, it is of no moment to the obligant; there can be neither profit nor loss *quoad* the transaction. This is plain enough. It may be more strikingly illustrated as follows:—Suppose an investment has been made in the Three per cent. Consols to secure an annuity of £100 in perpetuity, and that the investment had been made when the price of the Consols was £75, or for £2,500. If the funds should rise to par, and at the same time be reduced a quarter per cent., there would be an apparent gain of £333. 6s. 8d., while, in reality, there would be a loss of £333. 6s. 8d.; at least, that sum would require to be further invested to maintain the annuity required.

The business of a Life Assurance Office partakes much less of that character where immediate realization should be contemplated than most Companies, and rises very closely to the position we have just illustrated by figures, depending on the whole, for the general fulfilment of its contracts, most materially, if not principally, upon the revenue to be derived from its capital. While this is the case with reference to the whole general capital, the remark applies with more force to that portion consisting of permanent investment which we have at present in view, except for the sake of making a profit in such investments, which is not to be presumed to be the intention with which they are made; it can very rarely be expected that any necessity will arise for disturbing them prior to a time removed at such a distance as to make the present value of the capital, then to be realized, very small compared with that of the revenue to be derived in the meantime.

Calculating at 4 per cent. on an investment made at that rate, and to continue for 40 years, the value of the capital to be received at the end of that period is only one quarter of the value of the revenue for that intervening period—and if for 28 years, the value of the revenue is double that of the capital. It will thus be obvious of how little consequence the present selling value of such an investment is, and how little also any not very material change in its selling price, at the periods contemplated for its realization, will affect the present value.

It is believed to be the custom for many Assurance Offices, at an investigation, to value permanent and terminable annuities at the price they will bring on the average price for a short time previous; but the propriety of this is much to be doubted—indeed, it rather tends in the opposite direction to the truth. Composed—as a considerable portion of the funds of an Assurance Office is likely to be—of mortgages, producing a variable rate of interest, when the interest on them is reduced, the selling prices of permanent and terminable annuities are of course likely to rise; and, if estimated accordingly, the effect is to show a profit on those funds, while in fact the office, looking to the general return on its own investments, would be essentially poorer; indeed, when the mortgages were producing a high rate of interest, there would be more propriety in estimating the permanent investments at the high value, although, of course, the selling price was then likely to be low.

Upon the whole, it seems clear that the selling price is no proper criterion of the value at which investments of that nature should be estimated, where there is no intention of early realization. Let the security for the annual returns be narrowly inquired into;

if that be undoubted, then the proper way seems to be to estimate its value, if not altogether according to the rate of interest assumed by the office, more with reference to this criterion than by a method which tends to increase the value at that rate, at a time when the average return on the whole capital is falling, and that general capital is hence less valuable in respect of its return, and which leads to a diminution in the value when it is well fortified by the general capital, yielding an enhanced revenue.

Glasgow, 20th Dec., 1850.

I am, &c.,

W. S.

## ON THE FRENCH LIFE ASSURANCE COMPANIES.

*To the Editor of the Assurance Magazine.*

SIR,—In the first number of your *Magazine* I observed that a slight sketch was given of the “Life Assurance Companies in France.”

Our actuaries at home are so occupied, in these days of intense competition among Assurance Companies, in endeavouring to promote the objects of their own offices, and necessarily in watching the progress of competing Companies, that they have but little leisure to inquire what their neighbours on the other side of the Channel are doing.

Public attention, however, having been now called to this subject by the article just mentioned, some further inquiry into the system of business pursued by the French Companies may not, perhaps, be uninteresting either to the general reader or to the actuary.

That Life Assurance in France has been adopted from the English, and is still in its infancy there, the principal French Companies agree in allowing, as the following extracts clearly show:—

The prospectus of “L’Union” speaks in its introductory article on the subject of Life Assurance as follows:—

“ . . . . Mais il est une de ses branches peu connue encore en France . . . .  
 . . . . Cette création, qui seule suffirait pour caractériser le génie d’une nation, remonte en Angleterre aux premières années du XVIII<sup>e</sup> siècle.” And again—“ En France, les Assurances sur la Vie sont bien loin d’avoir acquis un semblable développement.”

“ La Compagnie d’Assurances Générales sur la Vie,” established about the year 1820, also states as follows:—

“ Les Assurances sur la Vie, qui existent depuis plus d’un siècle en Angleterre, sont encore dans leur enfance parmi nous.”

It appears, from the prospectuses of the French Companies, that their business at present is principally confined to absolute Whole Life Assurances, and Assurances for terms of years, on Single or on Two or more lives, and to Survivorship Assurances.

They do not seem to have yet adopted our multifarious modes of granting Assurances; and, indeed, if sufficient business can be obtained on the more simple plan, it is highly desirable to avoid all complications of a science already sufficiently complex; and it is well known, that the transactions of those London offices whose standing is the highest, have almost entirely been confined to those classes of assurances just mentioned.

The conditions of the different French offices appear to be very similar to those of our own respectable offices.

The only novel feature—and one which does not seem to have been as yet held out as an inducement to the British public\* (though, in point of fact, the same advantages would, on application, be granted by many London offices)—is that of reducing the sum assured, in default of payment of the premium within a certain period after the same becomes due, according to a scale agreed upon before the assurance is effected, provided only that the policy has been in force a certain number of years.

The following are the words of “L’Union” on this subject:—

\* Since writing the above, I have seen the prospectus of the United Service and General Life Assurance Association, and find therein a notification of a similar scheme.—H. W. P.